

IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA
Alexandria Division

AMDOCS (ISRAEL) LIMITED, an Israeli Corporation, <u>et al.</u> ,)
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Plaintiffs)
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) 1:10-cv-910 (LMB/JFA)
v.)
)
OPENET TELECOM, INC., a Delaware Corporation, <u>et al.</u> ,)
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Defendants.)
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MEMORANDUM OPINION

Before the Court are plaintiff Amdocs (Israel) Limited (“plaintiff” or “Amdocs”)’s Claim Construction Brief (“Pl. Mem.”) [Dkt. No. 328] and defendants Openet Telecom LTD and Openet Telecom, Inc.’s (collectively, “defendants” or “Openet”) Supplemental Claim Construction Brief (“Def. Mem.”) [Dkt. No. 329], both of which ask the Court to construe disputed claim terms in the patents-in-suit. The issues have been fully briefed and the parties were heard in oral argument. Having considered the arguments and evidence presented by the parties, the Court issues this claim construction Memorandum Opinion.

I. BACKGROUND

A. The Patents-in-Suit

At issue in this litigation are three related patents owned by Amdocs, specifically U.S. Patent Nos. 6,947,797 (“the ’797 patent”); 6,947,984 (“the ’984 patent”); and 7,631,065 (“the

'065 patent").¹ All of these patents claim aspects of a system "designed to solve an accounting and billing problem faced by network service providers." Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 761 F.3d 1329, 1331 (Fed. Cir. 2014) (hereinafter "Amdocs I") (internal quotation marks omitted). Specifically, "[c]ustomers of network service providers often use several distinct services, such as e-mail, voice over Internet Protocol, or streaming audio or video, on the same computer network." Id. (internal quotation marks omitted). Because "some services require more bandwidth than others, network service providers" attempt to "price their available bandwidth according to a user's needs." Id. (internal quotation marks omitted). The "raw usage logs for these services" are "generated by several different network devices that may exist in different network levels." Id. (internal quotation marks omitted). The "patented system collects these raw usage data records from their diffuse locations throughout the network and through appropriate filtering, aggregation, correlation, and enhancement transforms them into a format suitable for accounting," called "detail records" ("DRs"). Id. at 1331-32 (internal quotation marks omitted). These "DRs can then be stored in a central repository for generating auditing, accounting and billing reports or "can be sent directly to other systems," including billing systems." Id. at 1332 (internal quotation marks omitted). The three "patents are related, but each is directed to a different aspect of the subject matter." Id.

1. The '065 Patent

The "'065 patent describes the invention's primary function, which is the collection and transformation of network accounting records." Id. (internal quotation marks omitted). Amdocs

¹ Plaintiff dismissed a fourth patent, U.S. Patent No. 7,412,510 ("the '510 patent") from this litigation on March 8, 2018. [Dkt. No. 556].

accuses Openet of infringing independent claims 1, 7, and 13 and dependent claims 4 and 17 of this patent. The asserted claims recite:

1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:

computer code for receiving from a first source a first network accounting record;

computer code for correlating the first network accounting record with accounting information available from a second source; and

computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

4. The computer program product embodied on a computer readable storage medium of claim 3, wherein the accounting information is in the form of a second network accounting record.

7. A method of processing network accounting information comprising:

receiving from a first source a first network accounting record;

correlating the first network accounting record with accounting information available from a second source; and

using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

13. A system for collecting data from network entities for a data consuming application, comprising:

a plurality of data collectors to receive information from the network entities and to produce records based on the information, each data collector in the plurality of data collectors being associated with and coupled to a different one of the network entities; and

an enhancement component that augments data in one of the records produced by one of the plurality of data collectors with data from a different one of the records produced by another of the plurality of data collectors.

17. The system of claim 13, further comprising:

a module coupled to the plurality of data collectors, the module receives the records produced by the plurality of data collectors for aggregation purposes, and wherein the enhancement component resides in the module.

2. The '984 Patent

The '984 patent describes “methods and computer program products for creating reports based on the generated DRs, and for sending alerts based on those reports. The asserted claims also include limitations that describe in detail the core collection and conversion of network usage records.” Id. at 1333 (internal quotation marks omitted).

Amdocs asserts independent claims 1 and 13 and dependent claims 2, 6, and 8 of the '984 Patent. These asserted claims recite:

1. A method for reporting on the collection of network usage information from a plurality of network devices, comprising:
 - (a) collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers utilizing multiple gatherers each including a plurality of information source modules each interfacing with one of the network devices and capable of communicating using a protocol specific to the network device coupled thereto, the network devices selected from the group consisting of routers, switches, firewalls, authentication servers, web hosts, proxy servers, netflow servers, databases, mail servers, RADIUS servers, and domain name servers, the gatherers being positioned on a segment of the network on which the network devices coupled thereto are positioned for minimizing an impact of the gatherers on the network;
 - (b) filtering and aggregating the network communications usage information;
 - (c) completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
 - (d) storing the plurality of data records in a database;
 - (e) allowing the selection of one of a plurality of reports for reporting purposes;
 - (f) submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and
 - (g) outputting a report based on the queries.
2. A method as recited in claim 1, and further comprising submitting network activity queries to the database utilizing the selected reports for retrieving information on activity of the network.
6. A method as recited in claim 2, and further comprising generating an alert upon the occurrence of an event.
8. A method as recited in claim 6, wherein the alert indicates that services should be ceased.
13. A computer program product embedded into computer readable medium for reporting on the collection of network usage information from a plurality of network devices, comprising:
 - (a) computer code for collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers utilizing multiple gatherers each including a plurality of information source modules each interfacing with one of the network devices and capable of communicating using a protocol specific to the network device coupled thereto, the network devices selected from the group consisting of routers, switches, firewalls, authentication servers, web hosts, proxy servers, netflow servers, databases, mail servers, RADIUS servers, and domain name servers, the gatherers being positioned on a segment of the network on which the network devices coupled thereto are positioned for minimizing an impact of the gatherers on the network;

- (b) computer code for filtering and aggregating the network communications usage information;
- (c) computer code for completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
- (d) computer code for storing the plurality of data records in a database;
- (e) computer code for allowing the selection of one of a plurality of reports for reporting purposes;
- (f) computer code for submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and
- (g) computer code for outputting a report based on the queries.

3. The '797 Patent

Finally, the '797 Patent differs from the other patents by concentrating on the structure of the DRs. Id. at 1335. Amdocs asserts independent claims 1, 7, and 19 and dependent claims 2 and 8, which recite:

1. A method for generating a single record reflecting multiple services for accounting purposes, comprising:
 - (a) identifying a plurality of services carried out over a network;
 - (b) collecting data describing the plurality of services; and
 - (c) generating a single record including the collected data, wherein the single record represents each of the plurality of services.
2. The method as recited in claim 1, and further comprising sending the single record to a Business Support System.

7. A computer program product embedded into computer readable medium for generating a single record reflecting multiple services for accounting purposes, comprising:
 - (a) computer code for identifying a plurality of services carried out over a network;
 - (b) computer code for collecting data describing the plurality of services; and
 - (c) computer code for generating a single record including the collected data, wherein the single record represents each of the plurality of services;

wherein the services include at least two services selected from a group consisting of a hypertext transfer protocol (HTTP) session, an electronic mail session, a multimedia streaming session, a voice over Internet Protocol (IP) session, a data communication session, an instant messaging session, a peer-to-peer network application session, a file transfer protocol (FTP) session, and a telnet session;

wherein the data is collected utilizing an enhancement procedure defined utilizing a graphic user interface by:

listing a plurality of available functions to be applied in real-time prior to end-user reporting,

allowing a user to choose at least one of a plurality of fields, and

allowing the user to choose at least one of the listed functions to be applied to the chosen field in real-time prior to the end-user reporting.

8. The computer program product as recited in claim 7, and further comprising computer code for sending the single record to a Business Support System.

19. A method for generating a single record reflecting multiple services, comprising:

(a) collecting data with different formats describing a plurality of services, wherein the services are selected from the group consisting of an hypertext transfer protocol (HTTP) session, electronic mail session, a multimedia streaming session, and voice over Internet Protocol (IP) session;

(b) collecting data with different formats describing users of the services;

(c) generating a single record including the collected data representing each of the services and the users;

(d) collecting a plurality of the single records;

(e) generating a distinct record including the collected data of each of the single records, wherein the distinct record represents each of the plurality of single records; and

(f) sending the distinct record to a Business Support System.

B. Procedural History

Amdocs and Openet compete to provide software which enables providers to track customer usage of computer network services. On August 16, 2010 Amdocs filed this patent infringement action alleging that Openet infringed the '797 and '065 Patents. Complaint [Dkt. No. 1]. Amdocs added the '510 and '984 Patents via an Amended Complaint on February 3, 2011. Amended Complaint [Dkt. No. 50].² Openet filed an Answer and Counterclaim to that Complaint, alleging invalidity, non-infringement and inequitable conduct on the part of Amdocs. [Dkt. No. 51].

On May 26, 2011, Openet filed a Motion for Summary Judgment of Non-Infringement and Invalidity and Amdocs filed a Motion for Proposed Claim Constructions and Partial Summary Judgment of No Invalidity and No Inequitable Conduct. [Dkt. Nos. 95, 98]. This Court

² On February 9, 2018, Amdocs filed a Second Amended Complaint adding Amdocs Development Limited as an additional plaintiff after plaintiff's counsel learned that Amdocs Development Limited had become a co-owner of the patents-in-suit. [Dkt. No. 513].

granted Openet’s motion as to non-infringement on September 27, 2012, Order [Dkt. No. 248], and issued a memorandum opinion on January 22, 2013, Mem. Op. [Dkt. No. 259], concluding there was no genuine dispute of material fact given the Court’s construction of the terms at issue and that Openet’s product did not infringe Amdocs’ patents given that claim construction. *Id.* at 34. In reaching its conclusion, the Court found it necessary to construe three disputed claim terms, “enhance” as used in the ’065 Patent, “completing” as used in the ’510 and ’984 Patents, and “single record represent[ing] each of the plurality of services” as used in the ’797 Patent. The Court construed “enhance” to mean “to apply a number of field enhancements in a distributed fashion,” *id.* at 39, where “distributed” meant that “network usage records are processed close to their sources before being transmitted to a centralized manager,” *id.* at 23. “Completing” was construed to mean to “enhance a record until all required fields have been populated,” *id.* at 58, and “single record represent[ing] each of the plurality of services” was found to mean “one record that includes customer usage data for each of the plurality of services used by the customer on the network,” *id.* at 62.

Amdocs timely appealed that decision. [Dkt. No. 264]. The Federal Circuit affirmed the Court’s construction of “enhance” and “completing,” but imposed a plain meaning interpretation for “single record represent[ing] each of the plurality of services,” by adding that a “single record” could represent each of the plurality of services separately and in the aggregate. Amdocs I, 761 F.3d 1329. Accordingly, the Federal Circuit vacated the grant of summary judgment, finding that there were genuine issues of material fact as to infringement when the terms were thus construed. *Id.* at 1338.

While the case was on appeal, the Supreme Court decided Alice Corp. Pty. Ltd. v. CLS Bank International, which invalidated a computer software patent under 35 U.S.C. § 101 for

being directed to an abstract idea. 134 S. Ct. 2347 (2014). Upon remand to this Court, Openet filed a Motion for Judgment on the Pleadings, requesting judgment that all asserted claims were invalid under Alice. [Dkt. No. 293]. The Court granted the motion, finding that Alice represented a change or significant clarification of the law, and that all the asserted claims were directed to unpatentable abstract ideas and were invalid. [Dkt. No. 301]. Amdocs again timely appealed. [Dkt. No. 305]. A majority panel of the Federal Circuit reversed, holding that the claims at issue, understood in light of the written description, disclosed a “distributed system architecture comprising special-purpose components configured to cooperate with one another according to defined protocols,” which is patent eligible. Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 841 F.3d 1288, 1036 (Fed. Cir. 2016) (hereinafter “Amdocs II”) (internal quotation marks omitted). The court clarified that its ruling did not mean the patents-in-suit are valid, pointing out that they must still be tested under the statutory conditions for patentability, including novelty, obviousness, and the requirements of 35 U.S.C. § 112 (written description and enablement). Id.

On September 7, 2017, the parties held a status conference before a magistrate judge, advising that they wished to re-open expert discovery and that additional terms needed to be construed. [Dkt. No. 319]. The magistrate judge permitted the parties to submit additional claim construction briefs for a Markman hearing, although the parties dispute how many terms can be construed. [Dkt. No. 330] at 23:14-22. The issues have been fully briefed and the parties have argued their positions.

II. DISCUSSION

Both parties agree that the Court should construe the terms “network accounting record” (the ’065 Patent, claims 1, 4, and 7); “network entity” (the ’065 Patent, claim 13); and “data collector” (the ’065 Patent, claims 13 and 17), for which they had originally sought construction.

The Court had previously declined to construe those terms as they were not relevant to the summary judgment motions. See [Dkt. No. 260].

In addition, Openet asks the Court to clarify the meaning of “distributed” and “completing,” and to construe “computer code for” ('065 Patent, claim 1; '984 Patent, claim 13; '797 Patent, claim 7) and “enhancement component that” ('065 Patent, claim 13) as means-plus-function terms, subject to 35 U.S.C. § 112(f).³ Openet argues that the terms “fail to recite sufficiently definite structure or else recite[] function without reciting sufficient structure for performing that function” and are therefore means-plus-function terms. See Def. Mem. 2 (quoting Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc in part)). Finally, Openet seeks clarification concerning the requirements of the graphic user interface (“GUI”) limitations claimed in the '797 Patent. Openet appears to ask the Court to construe these claims to require the functions listed be performed in a specific order. Id. at 3.

Amdocs argues that Openet has raised new arguments for claim construction in asking the Court to clarify the meaning of “distributed,” in the proposed means-plus-function terms, and in the GUI limitations of the '797 Patent, see Pl. Reply [Dkt. No. 339] 1-2, and complains that the late notice of Openet’s intent to dispute these terms prejudiced Amdocs in responding and thus the additional proposed constructions should be denied, id. The magistrate judge orally ruled during a teleconference that Openet could brief the “means-plus-function” argument because the Federal Circuit had changed the legal standard applied to such terms after the

³ Before 2011, this subsection was the six undesignated paragraph in § 112 and was generally referred to as “§ 112, para. 6.” In 2011, Congress passed the Leahy-Smith America Invents Act, P.L. 112-29, § 4, 125 Stat. 284, 296 (2011), which edited § 112 to label each paragraph (a) through (f) but did not otherwise change this subsection. As a result, this subsection is now designated § 112(f), which is the citation form that the Court will use; however, much of the relevant case law refers to § 112, para. 6.

Court's previous memorandum opinion. *Id.* at 4. Openet's additional requests, including the proposed new construction of "distributed" and the GUI limitations, were not discussed during that teleconference. Amdocs requests that the Court deny these two requests without consideration as a result of Openet's late disclosure. *Id.* at 4-5. Because the Court finds that the parties have adequately addressed all issues, and in the interest of resolving this litigation, the Court will address all issues raised in the parties' respective briefs.

A. Standard of Review

A district court has the "power and obligation to construe as a matter of law the meaning of language used in the patent claim". Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). In claim construction, the words of the claim are "given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history." Thorner v. Sony Comput. Entm't Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The "primary focus in determining the ordinary and customary meaning of a claim limitation is to consider the intrinsic evidence of record, viz., the patent itself, including the claims, the specification and, if in evidence, the prosecution history, from the perspective of one of ordinary skill in the art."

Atofina v. Great Lakes Chem. Corp., 441 F.3d 991, 996 (Fed. Cir. 2006) (citing Phillips v. AWH Corp., 415 F.3d 1303, 1312-17 (Fed. Cir. 2005) (en banc)).

A claim term generally must be given the "ordinary and customary meaning" that "the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips, 415 F.3d at 1312-13. That means that when "a claim term understood to have a narrow meaning when the application is filed later acquires a broader definition, the literal scope of the term is limited to what it was understood to mean at the time of filing." Mass. Inst. of Tech. v. Abacus Software, 462 F.3d

1344, 1353 n.3 (Fed. Cir. 2006) (quoting Kopykake Enters., Inc. v. Lucks Co., 264 F.3d 1377, 1383 (Fed. Cir. 2001)).

In construing a claim term, the Court begins with the language of the claims themselves. Phillips, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive,” and “claim terms are normally used consistently throughout the patent.” Id. Specifically, under the doctrine of claim differentiation, there is a presumption “that an independent claim should not be construed as requiring a limitation added by a dependent claim,” Curtiss-Wright Flow Control Corp. v. Velan, Inc., 438 F.3d 1374, 1380 (Fed. Cir. 2006); however, claim differentiation is merely a presumption, “not a rigid rule[,] and it cannot overcome a construction required by the prosecution history.” TecSec, Inc. v. Int’l Bus. Machs. Corp., 731 F.3d 1336, 1345 (Fed. Cir. 2013) (citing Regents of Univ. of Cal. v. Dakocytomation Cal., Inc., 517 F.3d 1364, 1375 (Fed. Cir. 2008)). In particular, claim differentiation “cannot enlarge the meaning of a claim beyond that which is supported by the patent documents, or relieve any claim of limitations imposed by the prosecution history.” Fenner Investments, Ltd. v. Cellco P’ship, 778 F.3d 1320, 1327 (Fed. Cir. 2015). Claim differentiation also may not “serve to broaden claims beyond their meaning in light of the specification.” Id. (internal quotation marks omitted).

In addition to the language of the claim, the specification must also be considered. Indeed, “claims must be read in view of the specification, of which they are a part.” Phillips, 415 F.3d at 1315 (internal quotations omitted). The “specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” Id. (internal quotation marks omitted). Although claims are generally not limited to the preferred embodiment disclosed in the specification, id. at 1323, the “written

description and other parts of the specification . . . may shed contextual light on the plain and ordinary meaning” of a claim term. Aventis Pharm., Inc. v. Amino Chems. Ltd., 715 F.3d 1363, 1373 (Fed. Cir. 2013).

The prosecution history of the patents before the United States Patent and Trademark Office (“USPTO”) must also be considered. “Any explanation, elaboration, or qualification presented by the inventor during patent examination is relevant, for the role of claim construction is to capture the scope of the actual invention that is disclosed, described, and patented.” Fenner Investments, 778 F.3d at 1323 (internal quotation marks omitted). The relevant determination is how “persons in the field of the invention” would have understood the prosecution history. Id. Accordingly, the inventor’s subjective intent to claim certain subject matter “is of little or no probative weight in determining the scope of a claim.” Howmedica Osteonics Corp. v. Wright Med. Tech., Inc., 540 F.3d 1337, 1346 (Fed. Cir. 2008) (internal quotation marks omitted).

Evidence extrinsic to the patent, including “expert and inventor testimony, dictionaries, and learned treatises” may also be considered, Phillips, 415 F.3d at 1317 (internal quotation marks omitted); however, the Federal Circuit has expressed a preference for intrinsic evidence over extrinsic evidence. “Intrinsic evidence . . . is a more reliable guide to the meaning of a claim term than are extrinsic sources like technical dictionaries, treatises, and expert testimony.” Chamberlain Grp., Inc. v. Lear Corp., 516 F.3d 1331, 1335 (Fed. Cir. 2008). “Although definitions based on dictionaries, treatises, industry practice, and the like are often important aids in interpreting claims, they may not be ‘used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.’” ArcelorMittal France v. AK Steel Corp., 700 F.3d 1314, 1320 (Fed. Cir. 2012) (quoting Phillips, 415 F.3d at 1324).

One of “only two exceptions” to the general rule that the meaning of the words in a claim should be based on what a person of ordinary skill in the art when the patent application was effectively filed would have understood the term to mean is “when a patentee sets out a definition and acts as his own lexicographer.” Thorner, 669 F.3d at 1365. “To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning.” Id. (quoting CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002)).

The second exception to the general rule is “when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” Id. Accordingly, “when the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent, the doctrine of prosecution history disclaimer narrows the meaning of the claim consistent with the scope of the claim surrendered.” Biogen Idec, Inc. v. GlaxoSmithKline LLC, 713 F.3d 1090, 1095 (Fed. Cir. 2013).

B. Analysis

1. Clarification of the terms “enhance” and “distributed”

Openet asks the Court to revisit its construction of the term “enhance” and to clarify the meaning of the term “distributed.” Specifically, Openet seeks to confirm that “distributed” does not include “allocat[ing] among locations or facilities, as in a data-processing function that is performed by a collection of computers and other devices linked together by a network.” Def. Mem. 8-9 (alteration in original).

In defining “distributed” in its original memorandum opinion, the Court explained that “distributed” in this context refers to a “hub and spoke” architecture in which network accounting records are processed close to the source before being further transmitted. Mem. Op. 23; see also id. at 37 (“This design gives the system its ‘distributed architecture,’ because the

processing is not consolidated in a ‘hub,’ the CEM or the central database, but is instead distributed across ‘spokes,’ the several gatherers in the network.” (citations omitted)). In a footnote, the Court further explained that there are other broader definitions of “distributed,” such as an allocation of data-processing functions “among locations or facilities,” and that the “architecture described in the patents-in-suit is” a “specific instantiation of a broader computing principle.” Id. at 23 n.8 (internal quotation marks omitted). Openet argues that the Court declined to adopt this broader construction and should clarify that circumstances of geographical server redundancy and back-ups do not fall within the narrow construction of “distributed.” Def. Mem. 9.

Openet’s argument mischaracterizes the Court’s opinion. The definitions provided in footnote 8 did not add a narrowing limitation to the meaning of “distributed,” but rather illustrated that the relevant question of whether a product infringes on the patents-in-suit is whether the system employs a “hub and spoke structure” when “network usage records are processed close to their sources before being transmitted to a central manager.” Id. at 23. Indeed, in previously finding that Openet’s products did not infringe on Amdocs’ patents, the Court stated that those products “do not have the distributed architecture required” because they “function as a pipeline, in which all the output from one phase of processing is passed to another phase . . . until the final results are transmitted to the network service provider’s . . . system.” Id. at 24.

Further, the Federal Circuit affirmed the Court’s claim construction of “enhance,” relying, in part, on the Court’s construction of “distributed.” As such, the Federal Circuit’s construction is the law of the case and binding on this Court. See TA Instruments, Inc. v. Perkin-Elmer Corp., 277 F. Supp. 2d 367, 375 (D. Del. 2003) (“A patentee cannot be permitted to

continually revise claim construction throughout the course of litigation. This is especially true when the case has been reviewed by the appellate court and remanded to the district court, as the appellate court’s opinion becomes the law of the case.” (citation omitted)).

Openet appears to be seeking a construction that will make certain evidence of infringement not relevant because it would fall outside of its new claim construction of “enhance.” See Def. Mem. 3 (“Yet, as part of its infringement case, Amdocs appears to be relying on geographical redundancy—the same type of ‘allocat[ion] among location’ rejected by this Court.” (alteration in original)). Importantly, the Federal Circuit has already impliedly rejected this argument. When reviewing the Court’s summary judgment ruling, the Federal Circuit held that “Amdocs’ documentary evidence describing the structure and operation of the accused products creates genuine factual issues regarding whether the products enhance ‘in a distributed fashion’ ‘close to the source’ of the network information.” Amdocs I, 761 F.3d at 1341. Similarly, it held that “there is ample evidence on record to create a genuine issue of material fact regarding whether the CTEs are distributed through the Framework system and operate in a distributed manner.” Id. at 1343. The Federal Circuit thereby recognized that the question of whether the alleged infringing product is operated in a “distributed” manner is a question of fact that cannot be resolved through claim construction.

The cases relied upon by Openet to request a further construction of ‘distributed’ are inapposite here. In Telecordia Technologies, Inc. v. Cisco Systems, Inc., the Federal Circuit was reviewing a district court’s claim construction that was based, in part, on ad lib comments made from the bench during an earlier infringement litigation of the same patent. 612 F.3d 1365, 1373 (Fed. Cir. 2010). It was not addressing whether a district court could appropriately modify a claim construction that had already been decided by the circuit court. Similarly, in Jack Guttman,

Inc. v. Kopykake Enters., Inc., the Federal Circuit vacated a district court’s denial of a preliminary injunction after finding that the district court’s claim construction was wrong. See 302 F.3d 1352, 1361-62 (Fed. Cir. 2002). The court clarified that it is important for a district court to revisit claim construction after the preliminary injunction stage, because there has only been limited discovery and the constructions are expedited at that stage. Id. In contrast, here, there has been extensive discovery and briefing by the parties, and the Court made its constructions at the summary judgment stage; it was not rushed in reaching its conclusions and no good reason has been articulated for revisiting them now. Moreover, and of most significance, neither case involved a district court modifying a claim construction holding of the Federal Circuit.

For these reasons, the Court will not modify its definition of “distributed” and will allow the fact-finder to determine if Openet’s products process data usage records “close to their source” before “transmit[ing] them to a centralized manager.”

2. “Network Accounting Record”; “Network Entity”; and “Data Collector”

Both parties request that the Court construe the terms “network accounting record,” “network entity,” and “data collector.” The parties have provided a claim construction chart, outlining the terms’ usages and each side’s proposed construction:

Claim Term	Openet Proposed Construction	Amdocs Proposed Construction
Network accounting record (‘065 Patent, claims 1, 4, 7)	A record that accounts for network usage	A record reflecting one or more transactions on an IP and/or packet-based network
Network entity (‘065 Patent, claim 13)	Device or software in a network from which data can be collected	A source of data on an IP and/or packet-based network
Data collector (‘065 Patent, claim 13, 17)	Device or software that collects data from network entities	Software and/or hardware for collecting data from entities on an IP and/or packet-based network

The essential dispute with respect to these terms is whether “network” is limited to only IP and/or packet-based networks. See Pl. Mem. 10; Def. Mem. 10.⁴ The parties agree that limiting “network” to “IP and/or packet-based networks” applies to either all of the terms identified, or to none of the terms. Indeed, in their briefs, neither party addresses the term “network entity” or “data collector” other than to identify them as terms for construction. For this reason, this Memorandum Opinion focuses on the term “network accounting record” as used in the ’065 Patent as dispositive.

The starting point for claim construction is the specific language of the claim to be construed. See Phillips, 415 F.3d at 1314. Claim 1 of the ’065 Patent is illustrative of the term “network accounting record” and provides as follows:

1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:
computer code for receiving from a first source a first network accounting record;
computer code for correlating the first network accounting record with accounting information available from a second source; and
computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

Def. Mem., Ex. A (’065 Patent) at 16:4-14. Amdocs argues that the terms should be limited to only IP and packet-based networks because the claims require that a “network accounting

⁴ As explained by Amdocs, “traditional telephone networks were ‘circuit-switched’ networks where a dedicated communications channel called a ‘circuit’ was set up between two land-line phones with fixed identifiers (i.e., the telephone numbers).” Pl. Mem. 4. Telephone calls were billed based on the duration of the call, that is, the time the circuit stayed connected. Id. Packet-based networks, in contrast, track information differently; there is no fixed path for data transfer, and users do not always have a fixed identifier. Id. at 5. Each user’s system is assigned an IP address, which may be temporary, and “data is segmented into smaller parts which are transmitted as ‘packets,’ and sent over the network.” Id. “[T]he packets can be routed, combined or fragmented, in the same or different paths, as required to get them to their eventual destination.” Id.

record” first be “enhanced,” and a person of ordinary skill in the art would “readily understand” that such enhancement is only necessary in IP and/or packet-based networks. See Pl. Mem. 11. Similarly, the specification repeatedly states that the inventors’ intention was for the claim to cover only IP and/or packet-based networks. Id. Amdocs points to the Background section of the ’065 Patent which describes the difference between complex IP networks and older, circuit-switched voice networks and expressly distinguishes the older type of networks. Id. That background states that “what is desired is a system and method that track IP network usage information across multiple layers of the OSI [Open Systems Interconnection] network model.” ’065 Patent at 2:19-21. Amdocs further contends that a person of ordinary skill in the art would understand that “network accounting records” reflect only transactions on an IP and/or packet-based network because “gatherers, CEMs, databases and user interface servers of the type described” in the disclosed embodiments are only applicable to packet-based networks. Pl. Mem.12.

Openet responds that the term “network” has a plain meaning that is broad and not limited to any particular type. Def. Mem. 11. It argues that there is nothing in the intrinsic record that limits the plain meaning of “network.” Instead, Openet points out that one embodiment of the ’065 Patent explicitly discloses the use of non-IP based networks. See id. at 11; ’065 Patent at 15:21-27 (“In some embodiments, other platforms are used. Although the above description of the system 100 has been IP network focused with Unix or Windows NT systems supporting the elements, other networks (non-IP networks) and computer platforms can be used.”). Further, it points out that elsewhere in the drafting of the ’065 Patent, Amdocs was able to distinguish between “IP networks” and the broader term “network” and thus should be held to its drafting choice of not including the modifier “IP and/or packet-based” in its claim language. Id. at 12.

Finally, Openet argues that because the term “network” is not ambiguous, it should not be construed to save the validity of the claims at issue. *Id.* at 13.

In ordinary English, the term “network” means “a system of computers, peripherals, terminals, and databases connected by communications lines.” “Network,” Merriam-Webster (Mar. 28, 2018), <https://www.merriam-webster.com/dictionary/network>; see also “Network,” The American Heritage College Dictionary (3d ed. 2000) (defining “network” as a “group or system of electric components and connecting circuitry”). Applying this definition to claim 1 quoted above would mean that the ’065 Patent claims a method for receiving an accounting record from any system of computers, terminals or databases connected by communication lines. Although such an expansive definition lends support to Openet’s proposed construction, such a definition is extremely broad and would encompass almost any conceivable interconnected system.

When the “ordinary meaning of [a] non-technical term” is “sufficiently broad and amorphous,” reference to the written description can define the scope of claimed language. See Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., 262 F.3d 1258, 1269-70 (Fed. Cir. 2001). Accordingly, the next step is to examine the specification. Amdocs argues that the specification distinguishes IP networks from older switch-based telephone networks, and thus the focus of the ’065 Patent is on how to account for problems in complex IP and packet-based networks. See Pl. Mem. 13; Pl. Reply 10.

Amdocs’ proposed limitation is supported by much of the specification, but it is also contradicted by the intrinsic record. Although the specification refers to “IP sessions” and describes “[o]ne embodiment of the system” to function on an IP network, see ’065 Patent at 3:26-37, nothing in the claims or specification indicates that “network” is limited to “IP and/or

packet-based” networks. Indeed, the specification explicitly discloses the use of “non-IP networks” as one of many embodiments of the system. See ’065 Patent 15:21-27 (“In some embodiments, other platforms are used. Although the above description of the system 100 has been IP network focused with Unix or Windows NT systems supporting the elements, other networks (non-IP networks) and computer platforms can be used.”).

There is “a strong presumption against a claim construction that excludes a disclosed embodiment.” In re Katz Interactive Call Processing Patent Litig., 639 F.3d 1303, 1324 (Fed. Cir. 2011). Additionally, the specification states that “[i]n some embodiments, the system can access any network related information sources such as traffic statistics provided by routers and switching hubs,” ’065 Patent at 2:26-28, and “[t]he network devices represent any devices that could be included in a network,” id. at 5:10-11. Amdocs acknowledges the reference to non-IP networks, but asserts that it is meant to refer to only “other non-IP but still packet-based networks.” Pl. Reply 10. But it offers no support for this assertion, and does not identify any language within the specification that makes such a limitation.

Moreover, the specification makes clear that Amdocs understood the distinction between the narrow terms “IP network” or “packet-based network” and the broader term “network.” Throughout the ’065 Patent, Amdocs utilized the terms “IP Network” and “network,” but it chose to use only the broader term “network” within its claims. Compare, e.g., ’065 Patent at 2:8-11 (using “IP network”); id. at 4:56-57 (“IP network”); id. at 15:22-23 (“IP network”), with, e.g., id. at 2:25-26 (using the term “network”); id. at 3:59-60 (“network”); id. at 9:11-12 (“network sessions”). The Federal Circuit has rejected attempts to narrow claim language when there is a distinction between language used in the specification and in the claim itself. See Cordis Corp. v. Medtronic Ave, Inc., 511 F.3d 1157, 1174 (Fed. Cir. 2008) (“If the patentee had

intended [the claim] to only cover . . . complete slots, the patentee presumably would have drafted the claim to specify ‘complete slots,’ the term used in the written description to describe such fully bounded slots.”); Acumed LLC v. Stryker Corp., 483 F.3d 800, 807 (Fed. Cir. 2007) (“[T]he patentees knew how to restrict their claim coverage to holes passing through at right angles. They could have used the word ‘perpendicular,’ as they did in discussing their preferred embodiment. Instead, they chose a different term that implies a broader scope.”).

Amdocs further argues that the inventors intended their claims to cover only IP and/or packet-based networks. Pl. Mem. 11. Amdocs points to the Field of the Invention section of the ’065 Patent, which states that “the invention relates to accounting and billing for services in a computer network.” ’065 Patent at 1:31-33. Similarly, Amdocs recites a portion of the Background of the Invention section which describes the differences between IP networks and circuit-switched voice-networks: “Due to the diversity of IP data sources (e.g., routers, hubs etc.), the need for effect tracking far exceeds the problems addressed by telephone companies. . . . Therefore, what is desired is a system that allows for accounting and billing of transactions on EP based networks.” Id. at 1:62-64, 2:11-12.⁵

The inventor’s subjective intent is irrelevant to the issue of claim construction. See Howmedica, 540 F.3d at 1347; see also Markman, 52 F.3d at 985 (“[I]t is not unusual for there to be a significant difference between what an inventor thinks his patented invention is and what the ultimate scope of the claims is after allowance by the PTO.”). Moreover, courts have refused

⁵ The patent does not define what an “EP based network” is, or how it differs from an IP based network. See ’065 Patent at 2:11. The term “EP” does not appear anywhere else in the patent, nor does a basic internet search reveal that the term means anything relevant to this patent. This appears to be a typographical error in the patent application. See also Shamos Dep. [Dkt. No. 379-1] 11:2-7 (stating that Openet’s expert believes “EP based network” was a typographical error).

to limit the meaning of claims based on statements in the Field of the Invention or Background of the Invention sections of the patent specification. See Fortinet, Inc. v. Palo Alto Networks, Inc., 745 F. Supp. 2d 1025, 1028 (N.D. Cal. 2010) (finding a statement in the “Field of the Invention section” insufficient to limit the meaning of a claim term).

Amdocs’ argument that the ’065 Patent disavowed non-IP and non-packet based networks through its specification also fails. The purported disavowing statements within the specification only identify that circuit-switched networks were in use at the time of patenting and describe how the problems addressed by the proposed system are less troublesome in such networks. See, e.g., ’065 Patent at 1:51-64 (“[T]he need for effect tracking far exceeds the problems addressed by telephone companies.”); id. at 2:13-15 (“The problem [addressed by the patent] is even more difficult in IP network traffic”); id. at 3:45-46 (“DRs are somewhat similar in concept to the telephony industry’s Call Detail Records (CDRs).”). To disavow another proposed embodiment or usage of a patented method the specification must contain “expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” Epistar Corp. v. Int’l Trade Comm’n, 566 F.3d 1321, 1335 (Fed. Cir. 2009) (internal quotation marks omitted). In general, statements about the difficulties and failures in the prior art, without more, do not act to disclaim claim scope. See Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc., 620 F.3d 1305, 1315 (Fed. Cir. 2010). Far from criticizing the prior products for use of non-IP networks, the ’065 Patent takes issue only with the process the telephone companies used to capture information. See, e.g., ’065 Patent at 2:2-10. Indeed, as discussed above, in at least one embodiment, the specification explicitly allows the use of the method on a non-IP network. See ’065 Patent at 15:23-25.

This conclusion is further supported by considering how “network” would have been understood by a person of ordinary skill in the art “at the time of the invention, i.e., as of the effective filing date of the patent application.” Phillips, 415 F.3d at 1312-13. When Amdocs’ first provisional application was filed in 1997, internet networks were often accessed through circuit-switched networks using dial-up modems. That is, individuals attempting to connect to an IP network would use telephone lines, and thus circuit-switched networks. A person of ordinary skill in the art in 1997, reading about a process for tracking and monitoring traffic on the internet would likely understand that this would apply to networks utilizing such dial-up systems and excluding this type of embodiment would be inappropriate.

Amdocs further argues that this Court’s construction of the term “enhance” supports its proposed construction for “network.” Pl. Mem. 12-14. In its previous memorandum opinion, the Court relied, in part, on the distinction in the specification between the invention’s “distributed architecture” and prior art. See Mem. Op. 48-49. Amdocs contends that the specification similarly distinguishes “packet-based networks” from “circuit-switched” prior art and thus there is no “principled basis for limiting the claims to a ‘distributed architecture’ based on descriptions of the ‘invention’ in the specification, and then not similarly limiting the claims to an ‘IP and/or packet-based network’ for the same reason.” Pl. Mem. 13.

Amdocs’ argument misunderstands the prior opinion. In construing “enhance,” the Court found that the “distributed architecture and associated efficiency gains are inherent properties of the patented system itself and are not limited to some embodiments of the system,” and pointed out that “distributed architecture” is expressly described as a property of the system, which description is supported by examples of additional embodiments retaining that architecture. Mem. Op. 37-38 (citing ’065 Patent at 15:66-16:2). In contrast, IP and/or packet-based networks

are not described in the same careful fashion. In other words, nowhere is the type of network on which the system functions described as a property of the patented system. Moreover, some of the additional embodiments” expressly state that they could apply to a non-IP system. See ’065 Patent at 15:21-25. These distinctions make it clear that “network” should be properly construed according to its plain meaning and not limited to only IP and/or packet-based networks.

Finally, Amdocs argues that there is no reason to have a “distributed architecture” in a non-packet-based network, such as a circuit-switched network because all of the data needed to be collected can be collected from one location. Pl. Mem. 14. It contends that a person of ordinary skill in the art would understand that the claims require “distributed” enhancement precisely because they are only meant to function on an IP and/or packet based network. Id. This argument is unpersuasive for two reasons. First, Amdocs relies on its expert, Dr. Zegura, to support its position. This extrinsic evidence cannot overcome the meaning discernible from the intrinsic evidence. See C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861-62 (Fed. Cir. 2004). Furthermore, although Amdocs cites repeatedly to Dr. Zegura’s 2011 deposition, in her recent deposition on December 15, 2017, Dr. Zegura acknowledged that “network accounting records can but don’t have to reflect usage on circuit switched networks.” Zegura Dec. 2017 Dep. [Dkt. No. 377-1] 91:16-18; see also id. at 94:25-95:2 (“What I said was that it does not have to – that [a network accounting record] could reflect usage on a circuit switched network but it did not have to.”). This ambiguity undermines Amdocs’ position that the claimed limitations are limited to only IP and packet-based networks.

Amdocs’ position is also inconsistent with its infringement analysis. Amdocs argues that Openet’s products infringe because they “enhance” data in a “distributed” way and Openet’s Correlation and Transaction Engines (“CTEs”) are distributed. See Amdocs Interrog. Resp. at 4.

Yet, Amdocs also argues that the CTEs “aggregate[], correlate[], and enrich[] thousands of events in parallel from both circuit- and packet-switched networks.” See Def. Reply, Ex. K (“Zegura Initial Infringement Report”) ¶ 114. Indeed, in discovery, Amdocs’ expert testified that every implementation of Openet’s products infringes the Amdocs patents. See Zegura Dep. [Dkt. No. 107-1] 10:8-:16. Some of those implementations involve non-IP and non-packet-based networks. See Hogan Decl. [Dkt. No. 108] ¶¶ 6-7. Amdocs cannot both define the claim to be narrowly limited to only IP and/or packet-based networks and then claim that products implemented in other types of networks are infringing.

The prosecution history of the European counterpart to the ’065 Patent also supports giving a broad meaning to “network.” Statements to foreign patent offices can constitute “powerful extrinsic evidence.” Apple, Inc. v. Motorola, Inc., No. 10-cv-662-bbc, 2011 WL 10004441, at *13-14 (W.D. Wis. Oct 13, 2011) (collecting Federal Circuit cases evaluating foreign prosecution statements as evidence in claim construction); see also Starhome GmbH v. AT&T Mobility LLC, 743 F.3d 849, 858 (Fed. Cir. 2014) (holding that statements during foreign patent prosecution provided “yet another indication that the patentees did not intend to depart from the ordinary meaning” of a claim term).⁶

European Patent Application No. 989586388.8 (the ’688 Application) is the European counterpart to the ’065 Patent. See Def. Reply, Ex. P. After the ’688 Application was denied over prior art, Amdocs attempted to distinguish the prior art, arguing that it was based on a “circuit-switched network.” See Def. Reply, Ex. Q at 2-3 (arguing that the prior art “relates to an entirely different type of network, namely a circuit switched network” and that there was a

⁶ The Federal Circuit has cautioned against relying on foreign prosecutions when they address an issue of purely foreign law. See Starhome, 743 F.3d at 858. No such concerns are present here.

“difference between a circuit switch communications network and a packet switch network such as one utilising the Internet Protocol (IP””). Amdocs even amended its claims in the ’688 Application to recite “IP” fields. *Id.* at 7-8.

The European Patent Office (“EPO”) rejected these arguments, explaining that the specification of the ’688 Application needed to be amended to properly distinguish circuit-switched networks if Amdocs wanted to pursue this argument. See Def. Reply, Ex. V. In response, Amdocs supplemented the specification to include language specifically disparaging circuit-based systems: “Other problems relate to fault handling in an IP network environment. [The prior art] does not describe or address such problems and what is desired is a system or method that allows for accounting and billing of transactions on IP based networks.”). *Id.* at 10. These amendments to the specification were never included in the ’065 Patent.

These exchanges with the EPO demonstrate that Amdocs could have clearly distinguished circuit-switched networks in drafting the patents-in-suit but declined to do so. Moreover, they undermine any argument that a person of ordinary skill in the art would understand the ’065 Patent to be limited only to transactions on an IP and/or packet-based network. Indeed, because Amdocs acceded to the interpretation of the European patent examiner and limited its own specification, it tacitly acknowledged that the original language was not understood in that way.

For the reasons stated above, the term “network” as used in the proposed constructions for “network accounting record,” “network entity,” and “data collector” should not be limited to

IP and/or packet-based networks. Accordingly, the Court adopts the following constructions for each of the disputed terms:⁷

- “network accounting record” means “a record reflecting one or more transactions on a network;”
- “network entity” means “a source of data in a network;”
- “data collector” means “software and/or hardware for collecting data from entities on a network.”

3. Means-Plus-Function Claims

Openet next asks the Court to construe the terms “computer code for” and “enhancement component that” as means-plus-function terms.

A patent claim may be expressed using functional language. See 35 U.S.C. § 112(f); Williamson, 792 F.3d at 1347-49 & n.3. Subsection 112(f) provides that an “element in a claim” may “be expressed as a means or step for performing a specified function.” 35 U.S.C. § 112(f); see also Masco Corp. v. United States, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

There is a rebuttable presumption that § 112(f) applies when the claim language includes “means” or “step for” terms, and that it does not apply in the absence of those terms. Williamson, 792 F.3d at 1348; Masco Corp., 303 F.3d at 1326. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function.

⁷ The Court can find no meaningful difference between the remaining portions of the parties’ proposed constructions for the disputed terms, and neither party appears to take issue with those portions. Accordingly, the Court construes the language in a manner consistent with the plain and ordinary meaning of the terms.

Although this presumption had previously been characterized as “a strong one,” see Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1358 (Fed. Cir. 2004), the Federal Circuit recently abrogated Lighting World in this regard, see Williamson, 792 F.3d at 1349. Instead, the “standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. When a claim term lacks the word ‘means,’ the presumption can be overcome and [§ 112(f)] will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” Id. (citation and internal quotation marks omitted).

When it applies, § 112(f) limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” Williamson, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., 248 F.3d 1303, 1311 (Fed. Cir. 2001). “The next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” Id. A “[s]tructure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” Id. (internal quotation marks omitted). The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” Id. The corresponding structure “must include all structure that actually performs the recited function.” Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1298 (Fed. Cir. 2005). Section 112 does not

permit “incorporation of structure from the written description beyond that necessary to perform the claimed function.” Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1258 (Fed. Cir. 1999). Thus, Markman-type claim construction of a means-plus-function limitation requires that the Court first identify the stated function and, secondly, identify the corresponding structure, material, or acts described in the specification that is clearly linked to or associated with that function. See ACTV, Inc. v. Walt Disney Co., 346 F.3d 1082, 1087 (Fed. Cir. 2003).

a. **“Computer Code for”**

Claim 1 of the ’065 Patent, claim 13 of the ’984 Patent, and claim 7 of the ’797 Patent each recite “computer code for” performing a particular function. Claim 1 of the ’065 Patent is representative of the “computer code for” term:

1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:
 - computer code for receiving from a first source a first network accounting record;
 - computer code for correlating the first network accounting record with accounting information available from a second source; and
 - computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

Because the claims asserted do not include the “means” language traditionally used to signal means-plus-function claiming, the Court starts from the presumption that § 112(f) does not apply. Williamson, 792 F.3d at 1347-49 & n.3. This “presumption can be overcome and [§ 112(f)] will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” Id. at 1348 (internal quotation marks and alteration omitted).

Openet argues that the phrase “computer code for” is a nonce term that does not recite specific structure and should be subject to § 112(f). It relies on the declaration of its expert, Michael Shamos, to maintain that there is no disclosure in the claim elements that distinguishes the claim from generic “computer code” software, and thus the term lacks sufficient definite

meaning to establish a definite structure. See Def. Mem., Ex. E (“Shamos Decl.”) ¶ 30. Amdocs responds that this term has a definite structure that is understandable to one of ordinary skill in the art, based on its expert, Ellen Zegura, and the definition of computer code readily ascertainable from technical dictionaries. Pl. Reply 12-14.

Amdocs has the better argument. The term “computer code” suggests some kind of structure as evidenced by the dictionary definitions provided by plaintiff. For example, the Microsoft Press Computer Dictionary defines “code” as a

generic term for program instructions, used in two general senses. The first sense refers to human-readable source code, which is the instructions written by the programmer in a programming language. The second refers to executable machine code, which is the instructions of a program that were converted from source code to instructions that the computer can understand.

“Code,” Microsoft Press Computer Dictionary (2d ed. 1994). The Federal Circuit has recognized that technical dictionaries can help a court “better understand the underlying technology and the way in which one of skill in the art might use the claim terms.” Phillips, 415 F.3d at 1318 (internal quotation marks omitted); see also Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d 1311, 1320 (Fed. Cir. 2004) (“Technical dictionaries, which are evidence of the understandings of persons of skill in the technical arts, plainly indicate that the term ‘circuit’ connotes structure.”). Importantly, numerous courts have found that the term “code” connotes sufficient structure. See, e.g., Collaborative Agreements, LLC v. Adobe Sys. Inc., No. 15-cv-3853-EMC, 2015 WL 7753293, at *6 (N.D. Cal. Dec. 2, 2015) (“In this case, ‘code segment’ has some structural meaning, as supported by the dictionary definition tendered by Plaintiff; code segment is not a nonce word.”); Smartflash LLC v. Apple Inc., No. 6:13-cv-447-JRG-KNM, 2015 WL 4208754, at *3 (E.D. Tex. July 7, 2015) (“[T]he word ‘code’ refers to a particular type of structure . . .”); Affymetrix, Inc. v. Hyseq, Inc., 132 F. Supp. 2d 1212, 1232 (N.D. Cal. 2001)

(“[C]omputer code’ is not a generic term, but rather recites structure that is understood by those of skill in the art to be a type of device for accomplishing the stated functions.”).

Openet also argues that because the patents use “computer code for” multiple functions, it must not be able to provide sufficient structure to a person of ordinary skill in the art. This argument is not convincing. Simply because a claim term is capable of performing numerous functions, the term is not devoid of structure. The challenged term need only connote a type of structure; it is not required to specify a particular individual structure. See Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n, 161 F.3d 696, 705 (Fed. Cir. 1998) (holding that “detector” connotes sufficiently definite structure because even though “detector” did not specifically evoke a particular structure, it conveyed to a person of ordinary skill in the art a variety of structures known as “detectors.”). To the extent that Openet maintains that this multiple function usage is a basis for finding the claim indefinite, such an argument improperly conflates the issue of whether a term is a means-plus-function term with the issue of whether the specification discloses corresponding structure for a term that has been found to be a means-plus-function term. See Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1296-97 (Fed. Cir. 2014) (noting that these inquiries are “distinct”).

Moreover, the claim language here provides a description as to how the computer code operates. For example, the language in claim 1 does not simply describe broadly phrased high-level functions such as “receiving communications.” Instead, when read as a whole, claim 1 describes the objectives of the “computer code,” namely to “receiv[e],” and “correlat[e]” network accounting records, and the desired output of the “computer code” is to “enhance the first network accounting record.” See ’065 Patent at 16:7-14. Coupled with the Court’s prior construction of “enhance,” the objective of the limitation in Claim 1 is to apply “a number of

field enhancements in a distributed fashion” to the first accounting record. See id. That a person of ordinary skill in the art would understand the structural arrangements of the code components from the term “computer code” coupled with the limiting language of claim 1 was recognized by Amdocs’ expert. See Pl. Reply, Ex. D (“Zegura Decl.”) ¶¶ 15, 17, 19. The remaining limitations that use “computer code for” similarly recite the appropriate objective and outputs. See, e.g., ’797 Patent at 16:56-17:12 (reciting a limitation for computer code that identifies and collects data from a “plurality of services”⁸ to generate a single record that includes all of the collected data).

In understanding these claims, the Court finds Linear instructive.⁹ In Linear, the Federal Circuit rejected the contention that held that challenged term “circuit” was a means-plus-function limitation. The challenged claim in Linear was as follows:

1. A circuit for controlling a switching voltage regulator . . . , the control circuit comprising:

a first circuit for monitoring a signal from the output terminal to generate a first feedback signal;

a second circuit for generating a first control signal during a first state of circuit operation, the first control signal being responsive to the first feedback signal to vary the duty cycle of the switching transistors to maintain the output terminal at the regulated voltage; and

a third circuit for generating a second control signal during a second state of circuit operation to cause both switching transistors to be simultaneously OFF for a period of time if a sensed condition of the regulator indicates that the current supplied to the load falls below a threshold . . .

⁸ Defined to include at least “two services selected from a group consisting of a hypertext transfer protocol (HTTP) session, an electronic mail session, a multimedia streaming session, a voice over Internet Protocol (IP) session, a data communication session, an instant messaging session, a peer-to-peer network application session, a file transfer protocol (FTP) session, and a telnet session.” ’797 Patent at 16:63-17:3.

⁹ Because Linear predates Lighting World, the case which established the “strong” presumption, Linear followed the appropriate standard for overcoming the presumption against § 112(f).

379 F.3d at 1319. The Linear court began its analysis by consulting dictionary definitions:

Technical dictionaries, which are evidence of the understandings of persons of skill in the technical arts, plainly indicate that the term “circuit” connotes structure.” For example, The Dictionary of Computing 75 (4th ed. 1996) defines “circuit” as “the combination of a number of electrical devices and conductors that, when interconnected to form a conducting path, fulfill some desired function.”

Id. at 1320 (citation omitted).

The Linear court then concluded that when the structure-connoting term “circuit” is coupled with a description of the circuit’s operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112(f) presumptively will not apply.

In the instant case, the level of specificity in describing the operations of “computer code” is similar to that described for “circuit” in Linear. And, it is more specific than the description of the operation of “distributed learning module” in Williamson.

In Williamson, the claim term read:

a distributed learning control module for receiving communications transmitted between the presenter and the audience member computer systems and for relaying the communications to an intended receiving computer system and for coordinating the operation of the streaming data module.

Williamson, 792 F.3d at 1344. The en banc court concluded the challenged term did not connote sufficient structure and thus should be deemed a means-plus-function claim. See id. at 1349-51. The challenged term “module” was a “well-known nonce word” with no structural meaning, and the prefix language—“distributed learning control”—added no structural meaning. See id. Furthermore, the description of the module’s outputs and inputs—for example, “communications between the presenter and audience member computer systems”—did not impart any structural significance because the description failed to indicate how the module interacted “with other components . . . in a way that might inform the structural character of the limitation-in-question

or otherwise impart structure to the ‘distributed learning control module’ as recited in the claim”; the court characterized this description as being only “at a very high level.” Id. at 1351. As such, there was no evidence that suggested the “module” was anything but a “generic ‘black box’” for achieving the claimed functions. Id. at 1350.

In this case, “computer code” has some structural meaning, as supported by the dictionary definitions provided by plaintiff; code is not a nonce word. In addition, the claim language describes the computer code’s operation with a sufficient degree of specificity. Accordingly, the Court finds that Openet has not overcome the presumption that § 112(f) does not apply to the claims reciting “computer code for.” Because the Court concludes that the language is not a means-plus-function term, there is no need to proceed to the second step of the analysis.

b. “Enhancement Component That”

Openet also argues that the phrase “enhancement component that” is a nonce term that does not connote sufficient structure and should be construed as means-plus-function drafting.

The limitation appears in claim 13 of the ’065 Patent:

A system for collecting data from network entities for a data consuming application, comprising: . . . an enhancement component that augments data in one of the records produced by one of the plurality of data collectors with data from a different one of the records produced by another of the plurality of data collectors.

’065 Patent at 17:3-6.

Because “enhancement component” does not include traditional “means” language, the Court begins with the presumption that the term is not a means-plus-function claim. Openet must therefore demonstrate either that the claim term fails to “recite sufficiently definite structure” or that it recites “function without reciting sufficient structure for performing that function.”

Williamson, 792 F.3d at 1351. The asserted claim language must be read in light of the specification. See Robert Bosch, LLC v. Snap-On Inc., 769 F.3d 1094, 1099 (Fed. Cir. 2014).

Openet's expert has opined that "component" as used in claim 13 does not provide sufficient structure because "enhancement component" could refer to either hardware or software. See Shamos Decl. ¶¶ 55-56. He explains that if the component is meant to be software, it could be either an entire program or only one module of a program. Id. Conversely, if it is meant to be hardware, it could be a single transistor, or an entire computer processor. Id. Openet argues that these boundaries are an exercise in "arbitrary line-drawing" that is governed entirely by the recited function. Def. Mem. 23.

The Court agrees. To avoid means-plus-function treatment, the words of the claim must be understood by "persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure." Williamson, 792 F.3d at 1351 (citing Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996)). Here, "component" does not refer to any specifically known structure in the art. The USPTO's Manual of Patent Examination Procedure § 2181 identifies "component for"¹⁰ as a potential "non-structural generic placeholder" that is subject to § 112(f). Furthermore, numerous courts have found that generic terms such as "component" or "device" are nonce words. See, e.g., Robert Bosch, 769 F.3d at 1099; Umbanet Inc. v. Epsilon Data Management, LLC, No. 2:16-cv-682-JRG, 2017 WL 3508771, at *7 (E.D. Tex. Aug. 16, 2017) (finding that "document-encoding component" is subject to means-plus-function treatment), appeal docketed, No. 17-2556 (Fed. Cir. Sept. 18, 2017).

¹⁰ The use of "that" rather than "for" does not significantly alter the analysis. See Raytheon Co. v. Roper Corp., 724 F.2d 951, 957 (Fed. Cir. 1983) (construing "so that" to be equivalent to "means for" when determining whether a particular terms is drafted in means-plus-function form).

Similarly, there is nothing to help a person of ordinary skill in the art determine whether the “enhancement component” is hardware or software. In E2E Processing, Inc. v. Cabela’s Inc., No. 2:14-cv-36-JRG-RSP, 2015 WL 4051423, at *5-6 (E.D. Tex. July 2, 2015), the court found that the terms “selector component,” “adapter component” and “integration component” were not means-plus-function terms because the specification made clear that the components at issue had to be understood as describing a particular software structure. In contrast, Amdocs’ expert admits that “enhancement component” could mean either hardware or software. Zegura Decl. ¶ 25. Without some more defining language, “enhancement component” does not connote any sufficiently definite structure and should be construed as a means-plus-function term. Cf. Papst Licensing GmbH & Co. KG v. Apple, Inc., No. 6:15-cv-1095, 2017 WL 897172, at *5-6 (E.D. Tex. Mar. 7, 2017) (finding that “connecting device” and “component” were not nonce terms because the specification explicitly disclosed the structure for each).

Moreover, contrary to Amdocs’ contention, there is no disclosure of the “operations and objectives” of the limitation within the language of the claim. Although claim 13 describes the inputs to the “enhancement component” as data from records produced by a data collector with the desired outputs being an augmented data record, read as a whole the limitation does not explain how the “enhancement component” should implement this functionality, nor does it describe how the component interacts with the data collectors “in a way that . . . inform[s] the structural character of the limitation-in-question.” Williamson, 792 F.3d at 1351. There is nothing within the claim to demonstrate any of the steps necessary to augment the data records and the term “enhancement component” is not used elsewhere in the patent to refer to structure.

Amdocs responds that there are cases which found that “component” or similar language should not be construed as means-plus-function term. Pl. Reply. 17-18. These cases are

unpersuasive. First, the cases cited by Amdocs all pre-date Williamson, and expressly relied upon the now-abrogated “strong” presumption against means-plus-function drafting when the term “means” is not used in reaching their conclusion. See, e.g., Medtronic, Inc. v. Edwards Lifesciences Corp., Civil No. 11-1650, 2013 WL 2147909, at *9-10 (D. Minn. May 16, 2013); Visto Corp. v. Research in Motion Ltd., 623 F. Supp. 2d 756, 781 (E.D. Tex. 2008); Lodsys, LLC v. Brother Int'l Corp., No. 2:11-cv-90-JRG, 2013 WL 2949959, at *46 (E.D. Tex. June 14, 2009). For example, the Lodsys court repeatedly cited to standards and language in Lighting World, the case which the Federal Circuit explicitly abrogated in Williamson. See Lodsys, LLC, 2013 WL 2949959, at *42-43. The Court is unpersuaded that these courts would reach the same conclusion under the new standard.

Accordingly the Court finds that Openet has overcome the presumption that § 112(f) does not apply and that “enhancement component” should be construed as a means-plus-function term. The Court must now identify the function of the “enhancement component” and then examine whether the specification discloses a clearly linked corresponding structure. See JVW Enters., Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1330 (Fed. Cir. 2005).

Openet contends that the function of the “enhancement component” is merely to “augment” data records, and thus any corresponding structure must be clearly linked to the “augmenting” function. Def. Mem. 23-24. Openet’s proposed function ignores the modifier “enhancement” that is attached to the term “component.” It is well-established that prefixes can change the meaning of a term. See Williamson, 792 F.3d at 1351 (“[T]he presence of modifiers can change the meaning of ‘module.’”). Moreover, the verb “augment” only appears twice within the ’065 Patent, both times in connection with an “enhancement component” or “enhancement device,” see ’065 Patent at 17:3-:6 (“an enhancement component that augments”); id. at 18:23-

:24 (“an enhancement device, responsive to the policy, for augmenting”), and both usages involve combining data from one record with data from a separate record, see id. The ’065 Patent explains that the process of combining data from multiple sources “enhances” the data. Id. at 7:51-:57. A person of ordinary skill in the art reading the claims would understand that the term “augment” describes the process of enhancing one data record with the information pulled from another record. Accordingly, the function of the “enhancement component” is properly understood as to “enhance” a data record by “augment[ing] data in one of the records produced by one of the plurality of data collectors with data from a different one of the records produced by another of the plurality of data collectors.” See ’065 Patent at 17:3-:6.

Structure disclosed in the specification qualifies as “corresponding structure” if the intrinsic evidence “clearly links or associates that structure to the function recited in the claim.” Noah Sys., Inc. v. Intuit Inc., 675 F.3d 1302, 1311 (Fed. Cir. 2012) (internal quotation marks omitted). The disclosure must be of “adequate” corresponding structure to achieve the claimed function. Id. at 1311-12. Under 35 U.S.C. § 112(b), (f), therefore, “if a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim,” a means-plus-function clause is indefinite. Id. at 1312 (internal quotation marks omitted).

As discussed, the function of the enhancement component is to “enhance” and any corresponding structure must be linked to that function. The specification makes clear that enhancement of data records is performed by “gatherers.” See ’065 Patent at 10:46-:48 (“[G]atherers . . . provide data enhancement features to complete information received”); id. at 7:53-:57 (“By combining IP session data from multiple sources, . . . the gatherers create meaningful session records tailored to the NSP’s specific requirements.”); see also Amdocs I,

761 F.3d at 1338-39 & n.3 (finding that the “gatherers” are the “situs of the enhancement.”).

Indeed, the Court previously recognized the relationship between the enhancement function and gatherers by explaining that the “specification labels this function of the gatherers ‘data enhancement’” and that “the gatherers enhance . . . data by combining IP session data from multiple sources.” Mem. Op. 31 (internal quotation marks omitted). The specification explains that gatherers are “multi-threaded, light-weight, smart agents that run on non-dedicated hosts, as a normal user application . . . [.] a background process, or daemon.” See ’065 Patent at 6:54-:58. Although the specification clarifies that a gatherer can be “any hardware and/or software that performs the functions of a gatherer,” id. at 6:59-:60, the disclosed structures all have a generally understood meaning within the art, see Zegura Decl. ¶ 24. Moreover, the specification provides a 7-step enhancement process for “defining enhancement procedures in some embodiments of the system.” ’065 Patent at 12:8-:40; see also Zegura Decl. ¶ 24 (“[T]he specification identifies a 7-step enhancement process that can be used by the gatherers.”).

Because the enhancement process is a specialized function that cannot be performed solely by a general purpose computer, the specification must also disclose an algorithm for the gatherers to perform the enhancement function. See EON Corp. IP Holdings LLC v. AT&T Mobility LLC, 785 F.3d 616, 623 (Fed. Cir. 2015) (“A microprocessor or general purpose computer lends sufficient structure only to basic functions of a microprocessor. All other computer-implemented functions require disclosure of an algorithm.”). The algorithm “can be expressed in many forms, including flow charts, a series of specific steps, mathematical formula, prose, and so on.” Triton Tech of Tex., LLC v. Nintendo of Am., Inc., 753 F.3d 1375, 1378 (Fed. Cir. 2014). Here, Figure 3 of the specification provides a specific flowchart listing the series of steps necessary to enhance data:

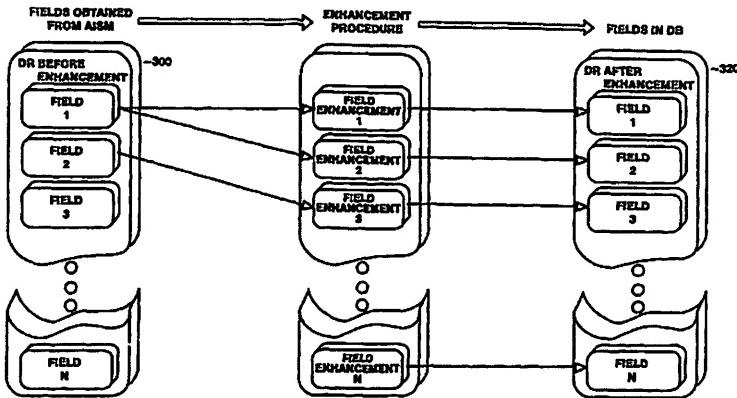
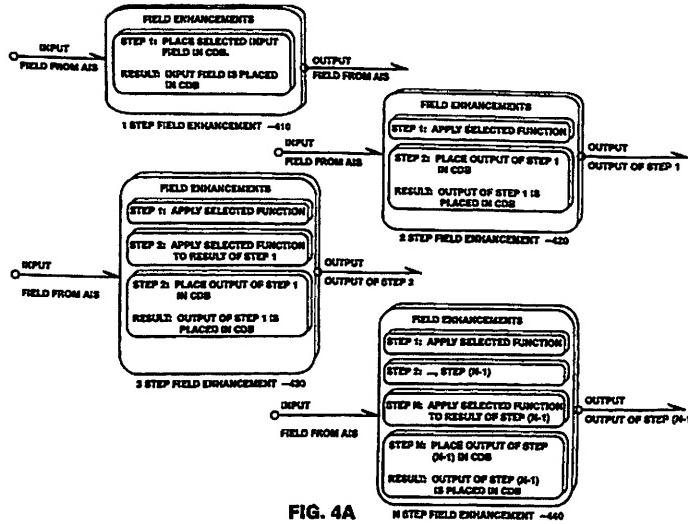


FIG. 3

As described in the specification, this figure illustrates how data obtained from the trigger of the enhancement procedure is processed before it is placed in the central database. See '065 Patent at 11:1-13. “[D]ata can be placed in the field directly, or new information may be added to the record by applying a Synchronous ISM function. . . . The data record starts with fields obtained from an asynchronous ISM. The fields in the DR are then enhanced using the field enhancements.” Id. at 11:5-11.

In addition, Figures 4A and 4B each illustrate different types of data enhancement. Figure 4A explains that field enhancement “includes applying zero or more functions to a field before storing the field in a specified field in the central database.” Id. at 11:31-34.



This type of field enhancement can include “one-step,” “two-step,” or “three-step” enhancement.

Id. Each step involves correlating additional data from a network device with the initial source data, with an extra step added for each additional data source. For example, in “one-step enhancement,” initial source data is placed directly into a field in the central database. Id. at 11:35:-38. In “three-step enhancement,” initial source data is used to obtain data from a “synchronous ISM,” and the result is used to obtain more data from a different “ISM.” Id. at 11:45:-49. The resulting enhanced data is then placed in a field in the central database. Id.

Figure 4B illustrates how an enhanced record is created from an initial data source.

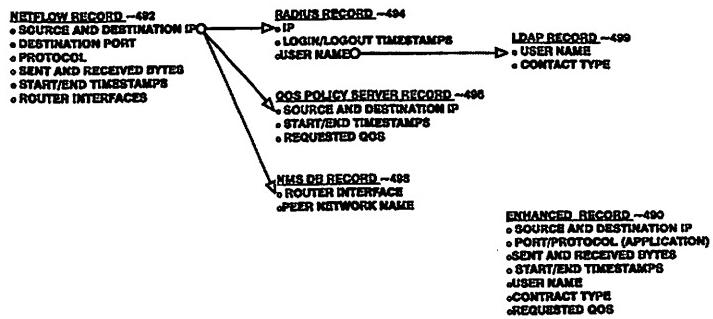


FIG. 4B

As explained in the specification, fields in the “netflow record” are enhanced from data found in the “radius record,” the “QoS policy server record,” the “NMS DB record,” and the “LDAP Record.” *Id.* at 12:1-:6. The output is an enhanced record with all fields completed. A person of ordinary skill in the art would understand how the enhancement function is to be completed from these disclosures.

Accordingly, although “enhancement component” should be construed as a means-plus-function term, the disclosed structure in the specification is clearly linked to its function and § 112(f) is satisfied.

4. GUI Limitations

Openet asks the Court to clarify that the GUI described in the ’797 Patent requires that the steps described take place in a specific order.¹¹ The limitation is recited as follows:

[W]herein the data is collected utilizing an enhancement procedure defined utilizing a graphic user interface by:

¹¹ The GUI limitations are applicable to asserted claims 1, 2, 7, 8, and 19 of the ’797 Patent. See ’797 Patent at 16:30-18:46. The GUI limitations to claims 1 and 19 were added by a certificate of correction accompanying the ’797 Patent.

listing a plurality of available functions to be applied in real-time prior to end-user reporting,
allowing a user to choose at least one of a plurality of fields, and
allowing the user to choose at least one of the listed functions to be applied to the chosen field in real-time prior to the end-user reporting.

'797 Patent 17:4-:12. Openet argues that the plain language of the claims requires the user to perform three separate operations, and that they must be performed in a specific order, namely: (1) listing a plurality of available functions; (2) allowing the user to choose a field; and (3) allowing the user to choose at least one of the listed functions to apply to the chosen field. Def. Mem. 24. Amdocs responds that a person of ordinary skill in the art would understand that, so long as the GUI satisfies these individual steps, then the GUI is covered by the claim. Pl. Reply 20.

Neither side is correct. As a general rule, “[u]nless the steps of a method actually recite an order, the steps are not ordinarily construed to require one” except when the “method steps implicitly require that they be performed in the order written.” See Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323, 1342 (Fed. Cir. 2001); see also Loral Fairchild Corp. v. Sony Corp., 181 F.3d 1313, 1322 (Fed. Cir. 1999) (observing in that case that “the language of the claim, the specification and the prosecution history support a limiting construction” in which the steps must be performed in the order written); Mantech Envt'l Corp. v. Hudson Envt'l Servs., Inc., 152 F.3d 1368, 1376 (Fed. Cir. 1998) (holding that “the sequential nature of the claim steps is apparent from the plain meaning of the claim language and nothing in the written description suggests otherwise”). The Federal Circuit has developed a two-step analysis to determine whether the steps of a method claim must be performed in a particular order where, as here, the claim does not explicitly require that order. See Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1369-70 (Fed. Cir. 2003). First, the court must look to the claim language “to determine if, as a

matter of logic or grammar, [the steps] must be performed in the order written.” Id. at 1369. If not, the court must examine the specification to determine whether it “directly or implicitly requires such a narrow construction.” Id. at 1370 (internal quotation marks omitted).

Although nothing in the claim language requires that step 1 must precede step 2, as each step describes activity logically independent of the other, logic and grammar mandate that step 3 can only occur after steps 1 and 2 have occurred. The plain language of step 3 dictates this conclusion by using the definite article “the” when referring to choosing “at least one of the listed functions” and applying such function or functions “to the chosen field.” ’797 Patent at 17:10-:12(emphasis added).

Amdocs’ expert statement that a person of ordinary skill in the art would understand that the GUI limitation in the ’797 Patent is satisfied if the individual steps are implemented in any order is not supported by any evidence and clearly not supported by logic, and is an unfortunate example of an expert trying too hard to advocate for a client’s position, rather than serving as an expert. Zegura Decl. ¶ 26. Therefore, the Court finds that step 3 in the GUI limitations in the ’797 Patent must be performed after steps 1 and 2, whose performance order is interchangeable with each other.

III. CONCLUSION

For the reasons stated above, Openet’s request for the Court to revisit its claim constructions of “enhance” and “distribute” are denied, and Amdocs’ proposed claim construction of “network accounting record,” “network entity,” and “data collector” is denied. Moreover, the phrase “computer code for” as used in the patents-in-suit is not a means-plus-function term subject to § 112(f). The phrase “enhancement component that” in claim 13 of the ’065 Patent is a means-plus-function term, but the specification provides sufficient structure

clearly linked to the “enhance” function of that limitation and the claim is not indefinite. Finally, as to the GUI limitations in the ’797 Patent (claims 1, 2, 7, 8, and 19), steps 1 and 2 must be performed before step 3, although steps 1 and 2 do not have to be performed in order as they are logically independent of each other.

Entered this 6th day of April, 2018.

Alexandria, Virginia



Leonie M. Brinkema
United States District Judge